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ORNITHOFAUNA OF CARSKA BARA SWAMP

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Abstract

This paper presents the ornithofauna of Carska Bara, a significant ornithological region in Banat, that spreads at the mouth of the River Begej into the River Tisza. The aim of this paper is to help protect and further develop this significant ornithological region.

Introduction

Carska Bara lies in Banat, SAP Vojvodina. It spreads on the left right of the dried old bed of the River Begej, between the old and the new protection dam (latitude 45°16′ N, longitude 20°25′ E). The surface of the whole region is around 1.000 ha (2,5 acres). The left part of the swamp ends with the Zrenjanin's loess terrace, the fertile agricultural soil. On the right of the dam spreads the famous fish-pond of Echka, having the total surface of 2.000 ha (5 acres). The swamp itself has formed on the alluvial deposits of the River Begej.

According to its pedological structure, the narrower region of Carska Bara end Tiganjica is swamped alluvium, poorly salted, with the pathches of soloti soils; on the other hand, Perlez's boggy region is a typical alluvium of heterogeneous mechanical structure (NEJGEBAUER at *all.* 1958).

In 1880 the wider region of Carska Bara was named as the outermost north-eastern part of so called Dugo Blato. The Perlez's boggy region had been called Fehér mocsár — The White Swamp. Dugo Blato spreaded along the left bank of the River Tisza, from its mouth to the hillside of loess terrace — to the village of Lukács-falu, today known as Lukino Selo. In the second half of the 19th century on the other side of the River Tisa were swamps. The writers who wrote about their travels (MARSILI, BALDAMUS, LÁZÁR, HODEK, MADARÁSZ) described this region as the immense sea of reed, interrupted by the free water surfaces and the "oasis" of willow and white poplar woods.

In the 18th century, began the hydromelioration works, first in the upper stream of the River Begej, and then on the Rivers Danube and Tisza. During the 1960's the works on digging of the new bed of the River Begej were being carried out. In order to preserve the region, the new bed went left to the old one, across the loess terrace. The new dam divides the wider region of Carska Bara and the new bed of the River Begej. Hydrological conditions of the Carska Bara region are influenced, in

the first place, by the River Begej and Tisza, but the influence of the Danube, when its water level is high, is also felt. For water regime regulation, two devices have been built.

Today, water surfaces, swamps and bogs (old bed of the River Begej with stagnant tributaries, Carska Bara and the part of Tiganjica) make aproximately 40% of the wider Carska Bara region; 20% of the region are covered with the boggy region woods of willow and white poplar; the rest 40% are meadows and pastures (Perlez's boggy region and part of Tiganjica).

Materials and Methods

In order to have the accurate insight in ornithofauna of Carka Bara we used all avilable materials and informations on this region (refer to the references), as well as the original informations collected on the numerous field visits.

The Results

Ornithofauna in Vojvodina includes araund 320 bird species. The total number of registrated nesting species is 199; from that number, 13 species do not nest any more, 32 are sporadic nestlers and newcomers represented by small number of nesting pairs (Table 1).

In Carska Bara regin 145 species have been registrated, that makes 73% of the whole Vojvodina. From the aspects of nature protection, of great importance are the nesting species that are endangered or rarified. The first "Red list" of birds in Vojvodina (GAROVNIKOV, HAM 1980—1981) gives the preliminary list of the endangered bird species.

Tab. 1. *Comparative review in number of nesting species in Vojvodina and on Carska Bara swamp*

	Vojvodina	Carska Bara swamp
nesters	199	145
one-time nesters	13	3
newcomers	32	14
regular nesters	154	128
nonendangered and potentially endangered species	75	64
"Red list"	79	60
the most endangered	22	17
significantly endangered	20	14
endangered	37	29

All regular nesting species in Vojvodina are, according to the degree of their endangerance, divided into nonendangered group and potentially endangered group (75 species); 75 species make the "Red list" (Table 1). The "Red list" includes three groups of species: the most endangered (22 species), significantly endangered (20 species) and endangered (37 species). In Carska Bara region 17 species of the "most endangered", 14 species of the "significantly endangered", and 29 species of "endangered" have been registrated.

The current situation is the result of the various conditions. Hydromeliorasation in 60's preserved the region, and at the same time no significant cutting of woods has been undertaken. During the last few years, some problems connected with the hunting have been settled, and planned investment projects stopped. The regulations concerning the birds protection are obeyed, but there are still problems concerning the fish breeding.

Conclusion

When giving the final opinion on the ornithofauna of Carska Bara, it should be emphasized that the number of species is mainly constant, with the tendency of numerical growth of the species, specially those whose habitat is water (swamps and bogs). In order to protect the nature in general, specially the birds, it is necessary to protect the whole region, as well as to build the development programs.

According to the published information and the information collected on the terrain, it has been ascertained that in the Carska Bara ragion live 196 species of birds. 145 species of nesting birds have been registrated, that make 73% of the ornithofauna of the whole Vojvodina. 27 species appear as overfliers, 11 species are winter visitors, 11 species are wanderers, and two species are irregular visitors. Almost 76% of the regular nestlers belong to the "Red list". Seventeen species belong to the "most endangered", 14 species belong to the "significantly endangered", and 29 species are "endangered".

Today under protection is only the part of Carska Bara-Vojtina Mlaka. In order to preserve and enlarge the number of bird species, it is necessary to put under protection the whole region.

The list of bird species from carska bara region

Nestlers
newcomers—sporadic

1. *Podiceps griseigena*
2. *Anas crecca*
3. *Milvus milvus*
4. *Aquila clanga*
5. *Circus cyaneus*
6. *Falco peregrinus*
7. *Charadrius dubius*
8. *Tringa hypoleucos*
9. *Chlidonias leucopterus*
10. *Sterna albifrons*
11. *Asio flammeus*
12. *Pastor roseus*
13. *Cisticola juncidis*
14. *Carduelis spinus*

Regular nestlers
potentially endangered

1. *Podiceps fuficollis*
2. *Podiceps cristatus*
3. *Ixobrychus minutus*
4. *Ardea cinerea*
5. *Anas platyrhynchos*
6. *Anas querquedula*
7. *Aythya ferina*
8. *Aythya niroca*
9. *Phasianus colchicus*
10. *Rallus aquaticus*
11. *Porzana porzana*
12. *Gallinula chloropus*
13. *Fulica atra*
14. *Vanellus vanellus*
15. *Columba palumbus*
16. *Streptopelia decaocto*
17. *Streptopelia turtur*
18. *Cuculus canorus*
19. *Asio otus*
20. *Picus viridis*
21. *Picus canus*
22. *Dendrocopos major*
23. *Riparia riparia*
24. *Hirundo rustica*
25. *Delichon urbica*
26. *Galerida cristata*
27. *Alauda arvensis*
28. *Motacilla alba*
29. *Motacilla flava*
30. *Sturnus vulgaris*
31. *Garulus glandarius*
32. *Pica pica*

33. *Coloeus monedula*
34. *Corvus frugilegus*
35. *Corvus cornix*
36. *Troglodytes troglodytes*
37. *Locustella luscinioides*
38. *Acrocephalus arundinaceus*
39. *Acrocephalus palustris*
40. *Acrocephalus scirpaceus*
41. *Acrocephalus schöenobaenus*
42. *Hippolais icterina*
43. *Hippolais pallida*
44. *Sylvia atricapilla*
45. *Sylvia curruca*
46. *Philoscopus collybita*
47. *Philloscopus sibilatrix*
48. *Muscicapa striata*
49. *Erithacus rubecula*
50. *Luscinia megarhinchos*
51. *Luscinia svecia*
52. *Turdus meruna*
53. *Aegithalos caudatus*
54. *Parus caeruleus*
55. *Parus major*
56. *Remiz pendulinus*
57. *Passer domesticus*
58. *Passer montanus*
59. *Fringila coelebs*
60. *Carduelis chloris*
61. *Carduelis carduelis*
62. *Coccothraustes coccothraustes*
63. *Emberiza shöeniclus*
64. *Emberiza citrinella*

"Red list"
the most endangered

1. *Phalacrocorax carbo*
2. *Phalacrocorax pygmaeus*
3. *Egretta alba*
4. *Platalea leucorodia*
5. *Plegadis falcinelus*
6. *Ciconia nigra*
7. *Anser anser*
8. *Milvus migrans*
9. *Haliaetus albicila*
10. *Hieraetus pennatus*
11. *Aquila heliaca*
12. *Aquila pomarina*
13. *Falco cherrug*
14. *Tringa totanus*
15. *Limosa limosa*
16. *Himantopus himantopus*
17. *Recurvirostra avosetta*

significantly endangered:

1. *Anas acuta*
2. *Anas strepera*
3. *Anas clypeata*
4. *Circus aeruginosus*
5. *Accipiter nisus*
6. *Perdix perdix*
7. *Coturnix coturnix*
8. *Chlidonias hybrida*
9. *Tyto alba*
10. *Sterna hirundo*
11. *Coracias garrulus*
12. *Merops apiaster*
13. *Corvus corax*
14. *Phoenicurus phoenicurus*

endangered:

1. *Podiceps nigricollis*
2. *Botaurus stellaris*
3. *Nycticorax nycticorax*
4. *Ardeola ralloides*
5. *Egretta garzetta*
6. *Ardea purpurea*
7. *Ciconia ciconia*
8. *Accipiter gentilis*
9. *Buteo buteo*
10. *Falco subbuteo*
11. *Falco vespertinus*
12. *Falco tinnunculus*
13. *Porzana parva*
14. *Crex crex*
15. *Larus ridibundus*
16. *Chlidonias niger*
17. *Columba oenas*
18. *Strix aluco*
19. *Caprimulgus europaeus*
20. *Alcedo atthis*
21. *Upupa epops*
22. *Dendrocopos syriacus*
23. *Dendrocopos minor*
24. *Lanius collurio*
25. *Lanius minor*
26. *Oriolus oriolus*
27. *Sylvia communis*
28. *Certhia brachydactyla*
29. *Emberiza calandra*

Bird of passage:

1. *Anas penelope*
2. *Pandion haliaëtus*
3. *Circus macrourus*
4. *Otis tetrax*
5. *Charadrius hiaticula*
6. *Pluvialis apricaria*
7. *Pluvialis squaterola*
8. *Calidris minuta*
9. *Calidris temminckü*
10. *Calidris alpina*
11. *Calidris ferruginea*
12. *Philomachus pugnax*
13. *Tringa erythropus*
14. *Tringa glareola*
15. *Tringa stagnatilis*
16. *Tringa nebularia*
17. *Tringa ochropus*
18. *Limosa lapponica*
19. *Numenius arquata*
20. *Numenius phaeopus*
21. *Scolopax rusticola*
22. *Gallanigo gallinago*
23. *Gallinago media*

24. *Larus argentatus*
25. *Larus minutus*
26. *Hydroprogne caspica*
27. *Acrocephalus paludicola*

Winter visitor:

1. *Gavia arctica*
2. *Anser albifrons*
3. *Anser erythropus*
4. *Anser fabalis*
5. *Aythya fuligula*
6. *Bucephala clangula*
7. *Mergus albellus*
8. *Mergus merganser*
9. *Buteo lagopus*
10. *Mergus serrator*
11. *Larus canus*

Accidental;

1. *Phoenicopterus ruber*
2. *Branta leucopsis*
3. *Melanitta fusca*
4. *Cygnus olor*
5. *Somateria molissima*
6. *Haematopus ostralegus*
7. *Limicola falcinellus*
8. *Phalaropus lobatus*
9. *Glareola nordmanni*
10. *Stercorarius parasiticus*
11. *Gelochelidon nilotica*

Irregular visitor

1. *Netta rufina*
2. *Numenius tenuirostris*

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A Carska bara ornitofaunája

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Kivonat

A Carska bara térségében irodalmi adataink és megfigyeléseink alapján össesen 196 madárfaj jelenlétét tartjuk nyilván. A gazdag fajlista 145 képviselője a fészkelő madarak csoportját képezi, ami a Vajdasági madárvilág 73% teszi ki. Az átvonuló madarak állományát 27 faj képezi. Téli' vendégként ismeretes 11 faj. További 11 faj nomádfaj, míg kettő ritka vendégfaj. A Carska bara fészkelő fajai 76% a „Vörös Lista" madarai. A különösen veszélyeztetett kategóriába 17 faj, a veszélyeztetett állományt 14 faj, míg 29 faj a veszélyezett madarakat képezi.

Jelenleg a Carska bara csak egy elenyésző részlege a „Vojtina mlaka" védett területének. A madárállomány gyarapodásának és megőrzésének elengedhetetlen föltétele a védelem kiterjesztése a Carska bara egész térségére.

Орнитофауна карской бары

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Резюме

На основании литературных источников и собственных исследований в окрестностях Карской Бары насчитывается 196 видов птиц; из них 145 видов относится к гневдующим, что составляет 73% всех видов птиц Войдошага. Количество перелетных птиц составляет 27 видов. Количество птиц, прилетающих на зимовку в данную местность — II видов. Столько

же видов относится к кочующим птицам, два вида из которых очень редкие. 76% всех гнездующихся видов птиц Карской Бары зтнесены в Красную книгу. Под угрозой уничтожения находятся 17 видов, под опасностью уничтожения 14 видов, а 27 видов, в угрожающем положении. В настоящее время только небольшая часть Карской Бары ("Войтина Млака") является заповедной.

Ornitofauna Carske bare

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Rezime

Na osnovu literaturnih podataka i obilazaka terena konstatovano je bogatstvo od 196 vrsta ptica na području Carske bare. Registrovano je 145 vrsta gnezdarica, što čini 73% u odnosu na ornitofaunu Vojvodine. 27 vrsta se pojavljuje u preletu, 11 vrsta su iz grupe zisski gosti, 11 vrsta spada u grupu lutalica, a 2 vrsta u retke goste. Skoro 76% redovnih gnezdarica Carske bare pripadaju „crvenoj listi". U grupi „najugroženijih" utvrdjeno je 17 vrsta, u grupi „ugroženijih" 14, a 29 vrsta u grupi „ugroženih".

Danas se pod zaštitom nalazi samo deo Carske bare „Vojtina mlaka". U cilju očuvanja i povećanja brojnosti ptičijih vrsta, neophodno je proširiti zaštitu na celo područje.